

Claims

1. A medicament for the treatment or prevention of diseases due to infection by *Neisseria meningitidis*, characterized in that it comprises glycoconjugates and/or lipoooligosaccharides (LOS) purified or included in outer membrane vesicles, blebs, lipid layers, liposomes and/or killed bacteria from commensal *Moraxella catarrhalis* with cross-reactive antigens to *Neisseria meningitidis* of the serogroup A, B, C, H, I, K, L, X, Y, Z, 29E or W135, or non-capsulated meningococcal strains, and/or antibodies against such glycoconjugates and/or lipoooligosaccharides.
2. The medicament of claim 1, wherein the cross-reactive antigens to *Neisseria meningitidis* are oligosaccharides of LOS, which are cross-reactive with human blood group antigens.
3. A medicament for the treatment or prevention of diseases due to infection by *Neisseria meningitidis*, characterized in that it comprises glycoconjugates and/or lipoooligosaccharides (LOS) purified or included in outer membrane vesicles, blebs, lipid layers, liposomes and/or killed bacteria from commensal *Neisseria lactamica* with cross-reactive antigens to *Neisseria meningitidis* of the serogroup B, C, H, I, K, L, X, Y, Z, 29E or W135, or non-capsulated meningococcal strains, wherein the cross-reactive antigens to *Neisseria meningitidis* are oligosaccharides of LOS, which are cross-reactive to human blood group antigens, and/or antibodies against such oligosaccharides of LOS.
4. The medicament of claim 1 or 3, characterized in that the glycoconjugates and/or lipoooligosaccharides are chemically modified, conjugated and/or hydrolyzed, preferably by mild acid hydrolysis.
5. The medicament of claim 1 or 3, preferably for the treatment of acute meningitis or septicaemia, characterized in that the antibodies are monoclonal or polyclonal, and that they are obtained from commensal and/or meningococcal species from:

- virus immortalized human lymphocytes secreting the glycoconjugate neutralizing, specific or cross-reactive antibodies,
- from human lymphocytes secreting the neutralizing antibodies fused with a human hybridoma cell line,
- from immunized animals, preferably mice, rats, rabbits or pigs producing polyclonal serum against such antibodies, or
- from immunized animals, preferably mice, rats, rabbits or pigs, after fusion of the mouse lymphocytes with a human or animal hybridoma cell line.

6. The medicament of claim 1 or 3, characterized in that it is a vaccine.
7. The medicament of claim 1 or 3, characterized in that it is provided as a nasal/oral spray, as a liquid for injection, as an orally applied capsule or tablet and/or in combination with an adjuvant.
8. The medicament of claim 1 or 3 for the treatment of acute meningitis or septicaemia, and/or passive immunisation and/or protection of close contacts and/or susceptible individuals, characterized in that the antibodies are monoclonal or polyclonal, and that they are obtained from commensal and/or meningococcal species, and/or native and/or toxin-conjugated, and/or adjuvant supplemented human blood group antigens (sialylated and non-sialylated forms of P, pK, paragloboside, Ii, Lewis):
 - from virus immortalized human lymphocytes secreting the glycoconjugate neutralizing, specific and/or cross-reactive antibodies
 - isolated from human serum and/or plasma, and/or human breast milk, and/or human secretions (i.e saliva),
 - from human lymphocytes secreting the neutralizing antibodies,
 - from human lymphocytes secreting the neutralizing antibodies fused with a human or animal hybridoma cell line,
 - from immunized animals, preferably mice, rats, rabbits, or pigs producing polyclonal serum against such antigens, or

- from immunized animals, preferably mice, rats, rabbits, or pigs after fusion of the animal lymphocytes with a human or animal hybridoma cell line.
- 9. The medicament of any one of the claims 1 to 8, characterized in that the antibodies are of the classes IgA₁, IgA₂, IgD, IgG₁, IgG₂, IgG₃, IgG₄, IgM, and/or IgE, that are secreted and/or membrane bound to human or animal cells, and/or to artificial membranes and/or liposomes.
- 10. The medicament of any one of the claims 1 to 9 for passive immunisation, characterized that it is provided as a nasal, oral or mucosal spray and/or tincture, as a liquid for injection, as an orally applied capsule or tablet and/or in combination with sodium selenite and/or with an adjuvant.
- 11. The medicament for passive immunisation with antibodies of any one of the claims 1 to 10, characterized that it is applied in combination with or without sodium selenite, or that sodium selenite is used as an agent for the treatment and/or protection of meningococcal disease without the medicament of claim 4, and/or prior to the application of the medicament of claim 4, and/or parallel to the application of the medicament of claim 4, and/or after to the application of the medicament of claim 4.
- 12. A diagnostic to assess the susceptibility of patients for diseases due to *Neisseria meningitidis*, characterized in that it comprises glycoconjugates and/or lipooligosaccharides from commensal bacteria with cross-reactive antigens to *Neisseria lactamica* or *Moraxella catarrhalis* and/or antibodies against such glycoconjugates and/or lipooligosaccharides and/or oligosaccharides of LOS of any of the claims 1 to 11.